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HOME ECONOMICS TEACHERS' KNOWLEDGE AND ATTITUDES TOWARD
THE INTEGRATION OF SPECIAL NEEDS STUDENTS IN THE CLASSROOM

The University of North Carolina at Greensboro

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IN THE CLASSROOM

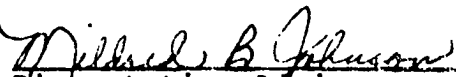
by

Jacquelyn Driver Webb

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
1985

Approved by


Dissertation Advisor

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

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March 15, 1985
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March 15, 1985
Date of Final Oral Examination

WEBB, JACQUELYN DRIVER, Ph.D. Home Economics Teachers' Knowledge and Attitudes Toward The Integration Of Special Needs Students In The Classroom. (1985) Directed by Dr. Mildred B. Johnson. 134 pp.

The purpose of this study was to determine the knowledge and attitudes of secondary home economics teachers in North Carolina toward the integration of special needs students in home economics programs. Teachers selected for the study were home economics teachers who attended the 1984 Vocational Summer Workshop. Subjects included home economics teachers from each of the eight educational regions of the public schools in North Carolina. Questionnaires were distributed to and collected from home economics teachers at the conference site. Data for the study were obtained from 279 teachers.

There was a significant difference in teachers' knowledge when compared by race. Caucasian teachers appeared to be the most knowledgeable concerning special needs students.

There was a significant difference in teachers' attitudes when compared by race. Black teachers had a more positive attitude toward special needs students than did teachers of other races.

There was a significant relationship between teachers' knowledge of special needs students and their attitudes toward the integration of special needs students. Teachers who were more knowledgeable

appeared to have more positive attitudes toward the learning capabilities of special needs students.

There was a significant relationship between teachers' educational level and their attitudes toward the concepts of mainstreaming. Teachers with higher educational levels appeared to have more positive attitudes toward the concepts of mainstreaming than those with lower educational levels.

A significant relationship existed between the tolerance of teachers and teachers' attitudes toward the concepts of mainstreaming. Teachers who appeared to be the most tolerant had the most positive attitudes toward the concepts of mainstreaming.

ACKNOWLEDGMENTS

The writer wishes to express sincere appreciation to Dr. Mildred Johnson, her advisor, for the valuable time, constant support, encouragement, and guidance that were given throughout the program of graduate study and the research study;

To Dr. Eileen Francis, Dr. Mary Morgan, Dr. Fritz Mengert, and Dr. Eunice Deemer, who gave support and encouragement during the graduate program and research study;

To each of the teachers who gave their time to complete the survey instrument;

To Mrs. Meg Murphy, Chief Consultant, Home Economics Education, Division of Vocational Education, Department of Public Instruction for North Carolina and her staff;

To the facilitators at each of the regional meetings at the 1984 Summer Vocational Workshop;

To Mrs. Marjorie Leonard, Mrs. Mary Charleston, Mrs. Melver Neal, Mrs. Sally Murphy and the late Mrs. Lottie W. Hall, home economics teachers in the Franklin County School System and their students, who provided helpful comments and suggestions in identifying the areas for the research study;

To Mr. Warren Smith, Superintendent of Franklin County Schools, Mr. Johnny Alford, Principal, Bunn High

School and Mr. Thomas Riggan, Principal, Louisburg High School; for their assistance given to the researcher in identifying the areas for the research study;

To Dr. Gaila T. Bradley, Mr. Robert Taylor and Dr. Chris Busch, Dr. Beverly Nichols and the late Mrs. Margaret Baldwin for their assistance and encouragement for the research study;

To Dr. Alton Thompson and Dr. Charles L. Hayes, North Carolina A & T State University, and the Statistical Consulting Center, Department of Mathematics, University of North Carolina at Greensboro, for statistical consultation and programming assistance for the research;

To Mr. Greg Thompson and Graphic Labs printers; Louisburg, North Carolina for assistance in reproducing the survey instrument;

To Mrs. Sandra Quick for her excellent work in typing this manuscript;

To the writer's sister Frances, brothers, Booker, Jr., Jesse, and John Driver, and mother-in-law, Mrs. Annie B. Webb, for their sacrifice and support through the graduate program.

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DEDICATION

This dissertation is dedicated to my husband,
Percy Webb and to my parents, Mr. & Mrs. Booker T.
Driver, Sr.

CHAPTER I

INTRODUCTION

Vocational education is charged with providing a total program of offerings to meet the educational needs of all people who can benefit from such instruction. Statistics have indicated that in North Carolina strides have been taken to serve special needs students in all vocational program areas; however, much still remains to be accomplished (Rice, 1978). Home economics, one of the vocational program areas, provides opportunities for all students to obtain knowledge and to develop practical life skills and management skills that would enable them to improve their quality of life. This is accomplished through the offerings available in the Consumer and Homemaking programs and in the Occupational Home Economics programs. The scope of the home economics program offerings at the secondary level provides for a wide range of individual needs and abilities.

The home economics teacher plays a vital role in mainstreaming students with special needs into the classroom and program. It was pointed out in the publication, A Guide to Mainstreaming in Home Economics

(1981) that students with special needs who had been initially placed in home economics classes and experienced success, often have other classes added to their schedules. The teacher must be well prepared academically and attitudinally to deal effectively with special needs students. Attitudes held by teachers were identified by Chadderdon, Coon, Ford, and Lehman (1966) as being the key to how successful students were in the home economics program. Understanding the attitudes of home economics teachers toward the integration of students with special needs and their knowledge of handicapping conditions could provide insight into what may be occurring in the classroom.

Importance of the Study

Teacher's attitudes and characteristics have been identified as key concepts to be considered in effectively teaching the special needs student. Harasymiw and Horne (1975) stated that ideally programs for the special needs student could best be developed if based on an understanding of teacher characteristics and attitudes held. According to Harasymiw and Horne (1975) teacher attitudes toward the handicapped were related to a variety of demographic variables such as age, sex, and educational experience.

Meis (1967) stated that it might be expected that teachers who had more experience working with people of diverse backgrounds, longer teaching experience, and who were highly committed to teaching might express more accepting attitudes toward teaching students with special needs than teachers who had limited experience, shorter teaching records, and who were less committed to teaching. It was also pointed out that there was an overriding demand for teachers who had an attitudinal commitment to teaching special needs youth. For the most part teachers have not been trained in the knowledge of the needs, limitations, strengths, and weaknesses of these students. Redick (1974) stated that home economics teachers' competencies and personal qualities in teaching special needs students were of particular concern. Research designed to assess and evaluate the knowledge and attitudes of home economics teachers towards the integration of special needs students in the regular classroom was recommended.

Statement of the Problem

This study was designed to determine the knowledge and attitudes of secondary home economics teachers in North Carolina toward the integration of special needs students in their programs. The specific objectives were the following:

1. To determine attitudes of home economics teachers toward the integration of special needs students.
2. To determine home economics teachers' general and specific knowledge about special needs students.
3. To determine the relationship of home economics teachers' attitudes toward the integration of special needs students to age, race, marital status, and years of teaching experience.
4. To determine the relationship of home economics teachers' knowledge about special needs students to age, race, marital status, and teaching experience.
5. Compare home economics teachers' knowledge and attitudes toward the integration of special needs students by educational district.
6. To determine home economics teachers' background preparation for teaching special needs students.
7. To determine the types of special needs students enrolled in home economics classes.
8. To determine the relationship of home economics teachers' tolerance and attitudes

toward the integration of special needs students in home economics programs.

Hypotheses

Based upon the problem statement, the following hypotheses were formulated:

- H₁ There is no significant difference in teachers' knowledge of special needs students when compared by
 - (a) age
 - (b) race
 - (c) marital status
 - (d) teaching experience
 - (e) educational district
- H₂ There is no significant difference in teachers' attitudes toward the integration of special needs students when compared by
 - (a) age
 - (b) race
 - (c) marital status
 - (d) teaching experience
 - (e) educational district
- H₃ There is no significant relationship between teachers' knowledge of special needs students and their attitudes toward the integration of special needs students in home economics programs.
- H₄ There is no significant relationship between tolerance of teachers and teachers' attitudes toward the integration of special needs students in home economics programs.

Limitations

This study was limited to home economics teachers who were employed in the public school system in the state of North Carolina during 1983-84. It was further limited to those teachers who attended the 1984 Vocational Summer Workshop.

Definition of Terms

The following terms have been defined for the purpose of this study:

Attitudes--opinions of home economics teachers representative of their thoughts or convictions in relation to the integration of special needs students in the regular classroom.

Knowledge--a range of home economics and special needs information that one knows and is able to exhibit by answers given on the designated inventory.

Special needs students in home economics--persons who are mentally, emotionally, or physically handicapped, visually or hearing impaired, or with speech defects.

Handicapped students--this term is used interchangeably with the term special needs students.

Regional or educational district--a geographical area designated by the State Department of Public Instruction.

North Carolina State Department of Public Instruction--the state agency assigned the responsibility for the K-12 educational system.

Home economics teacher--an individual who is certified to teach Consumer and Homemaking or Occupational Home Economics courses in the public school system.

CHAPTER II

REVIEW OF RELATED LITERATURE

The major purposes of this study were to determine the knowledge and attitudes of secondary home economics teachers toward the integration of special needs students in home economics programs. An Educational Resources Information Clearinghouse (ERIC) computer search conducted in April 1984 resulted in the identification of few published and unpublished papers, studies, and articles on teachers' knowledge and attitudes toward the integration of special needs students in the regular classroom. Even fewer studies existed on home economics teachers' attitudes towards the integration of special needs students in the regular classroom.

Over a period of several years, attention has been focused on the need of home economics teachers for special preparation to assist them in providing meaningful programs for the increasing numbers of students who have special needs (Whiteford, 1976). The attitudes of teachers have been assumed to have an effect on the teacher-pupil relations in the classroom, but little theory has been developed regarding the

importance of attitudes in relation to teacher effectiveness. Haring, Stern and Cruickshank (1958) reported that successful programs for exceptional children appeared to be largely dependent upon the attitudes of classroom teachers.

Larrivee (1981) stated that several studies concerned with the impact of teacher attitude on mainstreaming programs have shown both positive and negative results. The apparent lack of conclusive results in defining the crucial variables affecting development of a positive attitude toward mainstreaming provides evidence that further examination of teacher attitude is warranted.

The review of literature for this study will be presented in four parts. These include (a) legislation concerning special needs students, (b) teachers' knowledge and attitudes towards the integration of special needs students in the regular classroom, (c) personal and professional characteristics of teachers working with special needs students, and (d) educational programs for special needs students in the regular classroom.

Legislation Concerning Special Needs Students

"It is difficult to identify anything that has made a more profound impact upon the vocational

education of special needs students than the federal legislation enacted by Congress" (Meers, 1980).

Educational public policy and practice are reflected in legislation, which provides the means for the early identification of the special needs student, and for the delivery of regular and specialized services (Gaddis, 1977).

Funding for vocational education, specifically for special needs students was first made available with the passage in 1968 of amendments to the Vocational Education Act of 1963. In these amendments Congress clearly identified the special needs population and authorized specific funding for that group. However, vocational education funding for the special needs population did not begin in 1968. In fact, the special needs group has been provided with federal government assistance and training for over 100 years. Until the 1968 amendments, however, no piece of vocational education legislation had so clearly defined and provided funding for the special needs population (Meers, 1980).

The Vocational Education Act of 1963 (Public Law 88-210) was the first to define the term "special needs" as meaning individuals with disadvantaged or handicapping conditions that would prevent them from succeeding in a traditional education program.

Specifically, the act stated that:

It is the purpose of this part to authorize Federal grants to states to assist them to maintain, extend, and improve existing programs of vocational education, and to provide parttime employment to continue their vocational training on full-time basis, so that persons of all ages in all communities of the state--those in high school . . . and those with special education handicaps--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training. (U.S. Public Law 88-210)

The act further stated that federal funds could be used for programs providing occupational training to individuals with academic, socioeconomic, and other handicapping conditions. Since funds were not mandated or earmarked for use of the special needs population, little was done under the act to service this group. As a result special needs programming was at best randomly funded and haphazardly organized.

Because the special needs population was not being properly serviced by vocational education, Congress, in the Vocational Education Amendments of 1968 (Public Law 90-576), decided to provide funds specifically for special needs students. These amendments identified two main categories in the special needs population: the disadvantaged and the handicapped.

The disadvantaged were to receive 15 percent of all vocational education funding and the handicapped were to get 10 percent, for a total of 25 percent of all vocational education funds (Meers, 1980).

The Educational Amendments of 1972 (Public Law 92-318) further expanded vocational programming and services to the special needs students. These amendments provided funding and grants to institutions of higher education and to secondary school programs that extended career and occupational education services to students with special needs backgrounds.

The Vocational Education Amendments of 1976 (Public Law 94-482) was the next major piece of vocational education legislation supporting the special needs population. The 1976 amendments, as signed into law by President Gerald Ford, expanded the funding formula for special needs programs and services. The percentage of earmarked vocational education funds was increased from 25 percent to 30 percent, with 10 percent going to the handicapped and 20 percent to the disadvantaged.

The education sector has played a significant role in providing program aid for the special needs population. Perhaps the most far-reaching and significant piece of educational legislation in this area was the Education for All Handicapped Children Act

of 1975. This law is the civil rights act for handicapped children that guarantees all handicapped the right to a free and appropriate education (Meers, 1980). The Education for All Handicapped Children Act of 1975 (Public Law 94-142) was signed into law on November 29, 1975, by President Gerald Ford. The act stated that:

to assure that funds received by the state or any of its political subdivision under any other Federal program including Section 121 of the Elementary and Secondary Act of 1965 . . . and Section 122(a)(4)(B) of the Vocational Education Act of 1963 . . . under which there is specific authority for the provision of assistance for the education of handicapped children, will be utilized by the State, or any of its political subdivisions, only in a manner consistent with the goal of providing a free appropriate public education for all handicapped children. (U.S. Public Law 94-142)

Specifically the Education for All Handicapped Children Act of 1975 requires every state to provide a free and appropriate education, including vocational education programs, for all handicapped children. The act guarantees a number of rights to all handicapped children. These rights are specified in its major provisions:

- Services provided under the act are for handicapped children between the ages of 3 and 22, inclusive.

- State allocations will be made by a percentage formula. Allocations for the first fiscal year ending September 30, 1978, were determined by multiplying the number of handicapped children in the state by 5 percent. This amount is to be prorated upward to a maximum of 40 percent for the fiscal year ending September 20, 1982.
- State must identify and establish goals for providing a "full educational opportunity" to all handicapped children, a timetable detailing when these goals are to be accomplished, and a description of the services, facilities, and personnel needed to achieve these goals.
- An appropriate educational program must be made freely available to all handicapped children between the ages of 3 and 18 by September 1, 1978, and to all handicapped children between the ages of 3 and 21 by September 1, 1980.
- Where applicable, the state must provide a least restrictive environment (mainstreaming of the handicapped student into the regular school program) for handicapped children between the ages of 3 to 21 years.
- Each state must establish procedures to test and evaluate handicapped students so that they may be properly placed in an educational program. Steps must be taken to assure that these students will not be discriminated against due to testing procedures.
- The state must provide procedures for conducting annual evaluations of the effectiveness of various programs meeting the needs of handicapped students.
- Provisions must be made to "fully inform the parents" of the program and service in which the student is participating. Furthermore, the records diagnosing the status of the student's condition are to be made public to the parents or guardian. (U.S. Public Law 94-142)

The federal government has been a major force in providing financial and programmatic support for

special needs students. However, this was not always the case. Since the Constitution of the United States left the responsibility of public education to the states, Congress was initially reluctant to give any financial or moral assistance to such students. Gradually, however, this situation changed and Congress now provides help to the special needs population in educational programming (Meers, 1980).

Teachers' Knowledge and Attitudes Toward
The Integration Of Special Needs Students
In The Regular Classroom

Relatively few studies have been designed to determine the relationship between teachers' attitudes and knowledge. Redick (1974) stated that LaBue conducted a study in which the knowledge of educational psychology principles, child development, and child behavior were significantly related to teacher attitudes as measured on the Minnesota Teacher Attitude Inventory (MTAI). It was stated that to a great extent the attitudes of a person toward objects, persons, and processes have been shown to be dependent on the amount and quality of information possessed with respect to them.

Berryman, Neal, and Robinson (1980) studied attitudes toward the mainstreaming of handicapped

students in the regular classroom among rural Georgia teachers with regard to the characteristics of age, sex, teaching field, certification level, and years of professional experience. The results indicated that the teachers favored the principle of mainstreaming, and were willing to teach in mainstreamed classrooms those students whose disabilities did not inhibit their learning or that of their classmates. They opposed mainstreaming of students who were limited in the ability to learn or who were likely to be disruptive and thus deter the learning of entire classes of students. There were no significant differences in teacher's attitudes when compared by sex, level of certification, teaching field, and years of teaching experience. When age was compared, significant differences were found between the youngest and oldest group of teachers. Younger teachers were significantly more favorable toward mainstreaming.

Jordan and Proctor (1969) conducted a study to investigate the attitudes of specific teacher groups toward the educational placement of exceptional children, and to study the relationship of these attitudes to knowledge of disabilities, and to type and amount of teaching experience. Haring's instruments (General Information Inventory and Classroom Integration Inventory) were used to determine whether a

significant correlation existed between attitudes of teachers toward educational placement of exceptional children, their knowledge of disabilities, and type and amount of teaching experience. The results indicated that the special education teachers were significantly better informed than the regular classroom teachers. However, special education teachers did not have more "realistic" attitudes toward classroom integration than did the regular teachers. Experience increased knowledge, but experience did not create positive attitudes toward "realistic" classroom placement. It was indicated that the type of experience a teacher had was related to the teacher's knowledge of exceptional children. It was found that the years of teaching experience per se were not related to either "knowledge about" or "classroom acceptance of" exceptional children. Teachers with "extensive" academic credit in courses related to exceptional children were more knowledgeable about the exceptional children.

In an experimental workshop conducted by Haring et al. (1958) it was found that "increased knowledge per se was not found to be a significant factor in effecting modification of teachers' attitudes toward exceptional children" (p. 130). It was observed, however, that classroom experience with exceptional children, concurrent with expository workshops appeared

"to play a crucial role in the effectiveness of programs designed to influence teacher attitudes toward these children" (p. 130).

Harasymiw and Horne (1975) indicated that a teacher's attitude toward the handicapped was related to a variety of demographic variables such as age, sex, and educational experience. The effect of a program designed to prepare teachers for integration of handicapped students into regular classes was also investigated. A questionnaire was designed to measure the attitudes that teachers held toward exceptional children. A sample of 352 teachers from integrated and nonintegrated school settings were administered an attitudinal questionnaire. The findings indicated that the teachers from the integrated school settings tended to have more favorable attitudes toward exceptional children than teachers from nonintegrated school settings. Teachers who had more experience with exceptional children had more positive attitudes toward the exceptional children than did the teachers with less experience. Sex was not an important factor. No significant differences were found between the attitudes of male and female teachers. Also there were no significant relationships evidenced between the number of special education courses taken and favorable attitudes. Teachers with more education did not have

more positive attitudes than teachers with less education. The younger teachers had more positive attitudes toward exceptional children than did the older teachers.

Shotel, Iano, and McGettigan (1972) studied teacher attitudes associated with the integration of handicapped children in the classroom. It was pointed out that if handicapped children are to be integrated into the regular classroom for even a part of the school day, then the attitudes of regular classroom teachers toward these children emerged as a major concern. In the study a questionnaire was administered to elementary school regular class teachers to determine the effect of an integrative resource room program on the teachers' attitudes toward handicapped children. The questionnaire was designed to elicit teachers' attitudes toward handicapped children with respect to their integration into the regular program, their potential for academic and social adjustment, the teachers' competencies for teaching the children, and the need for special methods and materials in teaching handicapped children. The experimental group consisted of teachers participating in an integrative resource room program, and the control group consisted of teachers with self-contained special classes. The results indicated that the resource room program had

slight to moderate effects on teachers' attitudes and raised questions concerning the feasibility of integrating educable mentally retarded children into regular classes in schools utilizing the conventional grade organizational pattern.

Larrivee (1981) studied the effect of in-service training intensity on teachers' attitudes toward mainstreaming. The purpose of this study was to determine whether degree of in-service training would impact on the regular classroom teacher's attitude toward mainstreaming. Three groups of regular education teachers were compared: (a) a random sample; (b) a group attending monthly in-service training sessions during the school year; and (c) a group receiving intensive in-service training over a one-year period. The study utilized a 30-item attitude scale. A factor analysis of the scale yielded five dimensions underlying teacher attitudes toward mainstreaming. A comparison of the three groups of regular classroom teachers indicated that the intensive training group held significantly more positive attitudes than either of the other two groups. Differences were greatest on items associated with general philosophy of mainstreaming, academic and social growth of the special needs child, and perceived ability to teach special needs children. The results supported the importance

of increased experience and contact with exceptional children in conjunction with knowledge attainment and specific skill acquisition in the formation of more positive attitudes. It was also found that the availability of supportive personnel served to enhance the regular classroom teacher's development of a positive attitude toward mainstreaming.

Larrivee and Cook (1979) conducted a study on variables affecting teaching attitude toward mainstreaming. In the study an attitude scale was constructed using summated ratings. The scale was used to investigate the effect of selected institutional variables on the attitude of the regular classroom teacher toward mainstreaming special needs children. The scale included the following variables: teacher perception of degree of success with special needs children, availability of supportive services, classroom size, type of school, grade level taught, level of administrative support, and school size. The scale was administered to a sample of nearly 1,000 public school teachers in six New England states. Results of the analysis indicated that of the seven variables considered, the regular classroom teacher's perception of degree of success in dealing with special needs students had the most significant relationship to teacher attitude.

Wechsler, Suarez, and McFadden (1975) conducted a study to determine teachers' attitudes toward the education of physically handicapped children and to determine the readiness of school teachers to implement Chapter 766 of the Acts of 1972 of the Massachusetts General Laws, which called for the integration of handicapped children into the regular classroom. Questionnaires were administered to 639 teachers from all grade levels to explore teachers' attitudes toward the educational and emotional adjustment of physically handicapped children. Teachers were asked to indicate how they thought other classmates would behave toward the physically handicapped child; how difficult the child's adjustment would be; how willing the teacher would be to have a physically handicapped child enrolled in his or her class and whether or not it would be a problem for the teacher; and the type of educational situation that would be best for the handicapped child. Results indicated that teachers viewed children with asthma or heart conditions, and children requiring crutches and braces, as more easily integrated into the regular classroom than children with visual and hearing problems, or children with histories of convulsions and seizures. Of all teachers, those with previous experience teaching physically handicapped children were the most

optimistic about the integration of physically handicapped children into the regular classroom.

Few studies have reported the relationship of home economics teachers' attitudes to the teaching of special needs students. Asselin (1982) investigated the effects of a peer tutoring in-service program on home economics teachers' knowledge of procedures for using peer tutors, and attitudes toward integrating the handicapped student into the regular classroom. Forty-two home economics teachers selected one of the two in-service sessions scheduled during the state vocational conference. Using separate samples in a pretest-posttest design, 28 teachers in one session were tested prior to the peer tutoring service and served as the control. Fourteen teachers in the second session were tested subsequent to the in-service session and served as the experimental group. Control and experimental group knowledge test and attitude survey means were compared using an analysis of variance. The following variables--a) utilization of tutors, b) experience teaching handicapped students, c) college credit in special education, and d) in-service in special education--were examined in the analysis of variance with knowledge test and attitude survey means. The in-service program was effective in significantly increasing knowledge; however, attitudes toward

integrating the handicapped student in the regular classroom remained unchanged. The variables of experience and education had no effect on teachers' knowledge or attitudes.

Holman and Jorgenson (1971) studied the attitudes of home economics education student teachers toward the mentally retarded. The study measured attitudes in six areas using an instrument developed by Efron (1967), "A Survey of Opinions on Mental Retardation." The six areas designed to project views of the respondents toward mental retardation included the following: a) segregation; b) cultural deprivation; c) noncondemnatory etiology; d) personal exclusion; e) hopelessness; and f) authoritarianism. It concluded that the majority of home economics education student teachers a) did not feel retardates should be separated by institutionalization but should be included in the mainstream of society; b) believed that cultural deprivation significantly contributed to mental retardation; c) were noncondemnatory in their views as to the causal factors of retardation; d) desired to avoid personal contact with the mentally retarded; e) believed that the retardate could live a happy and productive life; and f) indicated they were nonauthoritarian in their viewpoint toward retardation. As a result the researchers expressed the opinion that the

teacher in the home economics classroom needs more information based upon adequate research to make decisions for meeting the challenge and responsibility of helping to integrate the mentally retarded in the regular classroom. (Holman and Jorgenson, 1971, p. 536).

Kilcoyne (1974) studied the attitudes of Wisconsin home economics teachers regarding educable mentally retarded children. The purposes of the study were to determine if certain teacher characteristics produced a significant difference in the attitude of Wisconsin home economics teachers toward segregation, personal exclusion, and hopelessness of the educable mentally retarded student. From a nonalphabetized list of 2300 Wisconsin home economics teachers, 260 teachers were selected for the study by a systematic random sample. A modification of the Factor Structure of Attitudes Toward the Retarded questionnaire developed by Efron and Efron (1967) was used in this study. It was determined that years of teaching experience produced a significant difference regarding teacher attitudes toward segregation and personal exclusion of the educable mentally retarded child.

Stake (1978) studied the attitudes of home economics teachers toward teaching slow learners in special classes versus regular classes. The major hypothesis of the study was that home economics

teachers believed that slow learners learned better when taught in special classes than when taught in regular classes. A survey questionnaire was mailed to home economics teachers in Western Pennsylvania. It was found that the majority of the home economics teachers felt that slow learners learned best when programmed in special home economics classes.

Redick (1974) conducted a study to examine the home economics programs offered to physically handicapped students in educational settings and to ascertain selected attitudes, characteristics, and instructional behaviors of the home economics teachers implementing these programs. In addition, the opinions of the home economics teachers of physically handicapped students and their principals were ascertained concerning teacher education programs designed to prepare home economics teachers to work effectively with physically handicapped students. Selected characteristics and attitudes of the teachers were assessed through the use of five formal instruments, the Knowledge of Handicapping Conditions Inventory, Attitudes Towards Disabled Persons Scale (Yukor, Block, and Campbell, 1960), Degree of Contact Index (Higgs, 1971), the Ambiguity Tolerance Scale (MacDonald, 1970), and the Analysis of Teaching Instrument. The findings indicated that teachers who

scored relatively high on the Attitude Toward Disabled Persons Scale had positive attitudes toward persons with handicapping conditions. Although the home economics teachers indicated that one should possess knowledge of handicapping conditions and that contact with disabled persons was a valuable experience, scores were not particularly high on the instruments used to measure these two characteristics.

Burdette (1982) conducted a study to determine the needs of Ohio Extension Home Economists to effectively serve the disabled population. An assessment was made to determine extension agents' attitudes toward disabled persons, determine the agents' degree of contact with physically disabled persons, the amount of training on handicapped persons that the agents had and to determine the agents' cognitive knowledge of independent living skills of handicapped persons.

Results of the study did not reveal significant correlations between attitudes toward disabled persons and degree of contact with physically disabled persons. A positive relationship existed between attitudes and knowledge of independent living skills of handicapped persons. It indicated that the agents that had higher training scores had more contact with physically disabled persons, even though they may not have possessed more knowledge. A significantly positive

relationship existed between knowledge and contact. A positive relationship between training and knowledge did not exist.

Meis (1967) conducted a study with home economics teachers in which some of the findings were similar to those of Harasymiw and Horne. The purposes of Meis's study were a) to explore the nature of home economics teachers' attitudes toward people of diverse backgrounds; b) to study the relation of teachers' attitudes to their general and specific knowledge of the disadvantages; c) to study the relation of teachers' attitudes and knowledge to level of professional commitment; and d) to determine whether the previously specified attitudes and knowledge were systematically related to selected personal and professional experiences of the teacher. It was found that professional commitment was the only variable which differentiated between more accepting and less accepting teachers. Teachers identified as more accepting of diverse types of people were not significantly different from those teachers identified as less accepting. Criteria used were the general and specific knowledge of the disadvantaged, self-ratings by teachers of acceptance in relation to other home economics teachers and other teachers, and preservice and inservice personal and professional experiences.

The major findings indicated that teachers who were identified as more accepting of people of diverse backgrounds could be distinguished from those teachers with less accepting attitudes by the degree of their commitment to the teaching profession. Because this study did not explore the classroom behavior of the teachers, it is not known if their teaching practices were consistent with their attitudes toward these students. If attitudes are a potent factor in shaping the actions of individuals and groups, then any information pertaining to either attitudes held by home economics teachers toward the special needs student or information concerning the determinants of such attitudes could contribute significantly to an understanding of these teachers, their classroom behavior and the programs they are responsible for implementing.

Personal and Professional Characteristics
of Teachers Working With Special Needs Students

Harasymiw and Horne (1975) recognized that attitudes toward the handicapped were related to a variety of demographic variables which could provide insight into the personal and professional characteristics of teachers. The relationship of the variables age, sex, and educational experience to the

attitudes held by teachers was explored. It was found that younger teachers recently educated were more positive in their attitudes toward exceptional children. It was believed that current teacher-training programs included some coursework in teaching students with special needs, and this could affect teacher perceptions.

Dykes' (1972) study on competencies of personnel for crippled and other health impaired students included a section on personal characteristics. Teachers and administrators deemed that the following personal characteristics were needed in working with special needs students: empathy and willingness to accept the children as they are, emotional stability, an understanding of the limits imposed by problems, flexibility and resourcefulness, patience, sense of humor, objective attitude, firmness, a strict but not rigid control of children, and a feeling of self-satisfaction with teaching crippled and other health-impaired children. Teachers attached the greatest value to empathy and a willingness to accept children as they are, while local administrators ranked flexibility and resourcefulness of greatest value.

Redick's (1974) study on "Selected Characteristics of Home Economics Teachers and Programs for Physically Handicapped Students" included a section on personal

characteristics. Teachers and principals agreed that certain personal qualities would enhance the teacher's ability to work effectively with special needs students. Qualities believed to be especially important were patience, flexibility, empathy, and acceptance.

Redick's (1974) study also focused on home economics teachers' competencies, personal qualities, and credentials. It was found that there were significant positive correlations between college degree and knowledge of handicapping conditions, between years of teaching and scores on the Attitude Toward Disabled Persons Scale and between degree of contact, and the number of students the teacher met per week. It appeared that teachers who met more classes per day had a higher level of outside contact with disabled persons. There was a significant negative correlation between years of teaching and the score on the Ambiguity Tolerance Scale. It appeared that as the number of years of teaching increased, the teacher's tolerance for ambiguous situations decreased. Of those who had advanced degrees, all but one had had advanced coursework relating to handicapping conditions. Redick (1974) stated that additional preparation most likely contributed to the significant positive relationship found between college degree and the score on the Knowledge of Handicapping Conditions Inventory. It was

also found that years of experience in teaching handicapped students correlated highly with age, and older, more experienced teachers in this study tended to score lower on the Analysis of Teaching Instrument. According to Redick, this finding was similar to the results of Ryans' (1960) study of teacher characteristics.

In Ryans' (1960) study, it was found that elementary and secondary teachers who scored low in over-all classroom behaviors were more frequently from an older age group and had extensive teaching. The one characteristic which was the exception was responsible, businesslike behavior in the classroom. The older teachers and those with extended experience received higher scores. (p. 133)

This related to Redick's (1974) findings that years of teaching experience were significantly negatively correlated with scores on the Ambiguity Tolerance Scale. It appeared that older more experienced teachers preferred a more controlled, structured, businesslike classroom situation. Based on this study, it would seem that teachers need to be particularly competent in developing and adapting curriculum, individualizing instruction, and understanding the needs and characteristics of special needs students.

In an attempt to modify teachers' attitudes, Lane (1976) reported that a background in special education could help alleviate stereotypes or prejudices toward

exceptional children. This study investigated the effects of labels conveying ethnic group membership and retardation on evaluative statements by prospective teachers. The data supported the premises held by Payne and Murray (1974) and Kraft (1973) that lack of experience in the area of special education was the main contributor to many teachers' fears and prejudices. This may also be true in home economics. The home economics teachers' lack of experience with the special needs student may be the main contributing factor to many of the teachers' fears and prejudices.

Educational Programs For Special Needs

Students In Home Economics

While teacher knowledge, attitudes, and characteristics are appropriate factors to consider when discussing education for special needs students, an examination of the educational programs afforded these students is also pertinent. This section deals with current trends and problems related to teaching the special needs student in home economics programs.

Since 1975, the number of special needs students served in North Carolina has increased steadily (North Carolina Department of Public Instruction, 1983). Home economics teachers have more students with special needs in the classroom than ever before. Various

reasons have been given for the increased involvement of special needs students in the classroom. According to Gaddis (1977) one of the reasons was that the public has been enlightened from medical and educational research that has resulted in the identification and treatment of special needs students.

Handicapped students represented 3.55 percent of the total vocational education enrollment in North Carolina for the 1981-82 school year. Nationwide, handicapped students comprised 2.43 percent of the total vocational enrollment for the 1981-82 year. During this time period, 17 percent of the total handicapped population in North Carolina were served in a variety of vocational program areas, including home economics (North Carolina Department of Public Instruction, 1983).

Redick (1974) stated that by definition, handicapped students were those who deviated from the average person to such an extent that a modification of school practices or special educational services was required in order to develop their maximum capacities. Possible educational modifications to meet the special needs of these students fall into three major categories: learning environment (where it is taught), content (what is taught), and pedagogy (how it is taught). Modifications may be needed in any one or

combination of these areas depending upon the specific handicapping condition which exists. It was further pointed out that curriculum based on regular courses of study that were developed sequentially and presented in small class groups seemed most effective in maintaining and strengthening educational skills. Different types of instructional programs used in which the curriculum emphasized daily living activities, the development of a positive self-concept, and the development of socialization skills were important. The ultimate goal is to help each child become as independent as possible.

Redick and Redick (1980) emphasized that as home economics teachers faced the challenge of working with increased numbers of special needs students in their classrooms, possible barriers to effective mainstreaming were being identified. Problems created by the mainstreaming movement were perceived to exist at both the administrative level and the instructional level. Teachers identified administrative problems as those involving the school's fixed daily schedule of classes, time segments allocated for class periods, mandated procedures for grading or marking, predetermined or inflexible course offerings, random assignment of students to classes, and the lack of instructional aides. Instructional problems identified

were related to available media resources, textbooks, reading materials, physical facilities, and equipment. A positive approach dealing with these administrative and instructional problems must be used.

Many teachers are making efforts to be well prepared to teach a class with a range of ability levels. Liddle (1980) reported that, while the idea of mainstreaming students into a regular classroom caused some teachers to feel inadequate in classroom planning, the teacher has considerable resources and strategies for helping all students, regardless of ability level. Redick's (1974) study emphasized that teachers felt their home economics programs needed further development in the area of curriculum. Curriculum guides or resource guides that specifically dealt with teaching home economics to special needs students were not found to be accessible to any teacher in the study. Little has been done to help home economics teachers of special needs students develop and implement effective home economics programs. Further development of educational programs for special needs students is still needed.

It has been recognized that several forces in the world today are responsible for the involvement of home economics teachers with students having special needs in the classroom. Educational public policy and

practice are reflected in legislation, which provides the means for easy identification of students with special needs. Home economics teachers play a vital role in mainstreaming students with special needs into the classroom. Home economics teachers are obligated to provide an effective teaching-learning environment in the classroom for students identified as having special needs. The teachers must be well prepared to deal effectively with students having special needs.

Home economics teachers' knowledge of the special needs learner and their attitude towards the integration of special needs learners have been identified as key concepts to be considered in effectively teaching the special needs student. Several factors may affect the knowledge and attitude of these teachers. Among these factors personal and professional characteristics of the teachers may have an effect. Certain characteristics may enhance the teachers' ability to work effectively with special needs students. Home economics teachers must carefully analyze and ascertain how best to provide the needed educational service for the special needs student.

CHAPTER III

DESIGN OF THE STUDY

The purpose of this study was to determine the knowledge and attitudes of secondary home economics teachers toward the integration of special needs students in home economics programs. A descriptive study utilizing a survey approach was considered to be the most appropriate for the problem.

Selection of Subjects

The target population was defined as vocational home economics teachers employed in the public schools within the state of North Carolina during 1983-84. The population was further defined as those home economics teachers who attended the 1984 Vocational Summer Workshop.

Instrumentation

Based on the review of literature, the instruments selected for use in this study were the Attitudes Toward Mainstreaming Scale (ATMS) developed by Berryman, Neal and Robinson (1980), the Revised Ambiguity Tolerance Scale (AT-20) developed by

MacDonald (1970), and the Knowledge of Independent Living Skills Test developed by Burdette (1982). These three instruments and a personal data information form developed by the investigator to obtain demographic data formed the instrument, Knowledge and Attitudes Toward Students With Special Needs (Appendix A).

The first section of the instrument consisted of demographic types of questions, items 1-10. Responses to these items provided background information related to region of employment, sex, race, age, marital status, educational level, years of teaching experience, types of special needs students taught, preparation for teaching special needs students, and program funding received for special needs students.

The Attitudes Toward Mainstreaming Scale (ATMS), items 11-28 of the instrument, was selected to measure teacher attitudes toward the integration of handicapped students into the regular classroom. The teachers indicated their reaction to each statement according to how much they agreed or disagreed with each statement. The attitudinal scale consisted of 18 six-point Likert-type items derived from a pool of attitudinal statements concerning the efficacy of mainstreaming both handicapped students in general and those with specific disability types in particular. Four statements dealt with the feasibility of teaching

normal and handicapped students in the same classroom and 14 statements dealt with the feasibility of the least restrictive educational placement for various types of handicapped students. Each of the 18 items was rated on a scale of 1 to 6, with 1 indicating strong agreement and 6 strong disagreement with the statement. Scores were reported as total scores for factors and for the scale as a whole. The instrument had been validated and cross-validated through a principal axis factor analysis procedure. The 159 participants comprising the original sample and the 164 participants of the cross-validation sample included both preservice and inservice teachers in 17 different teaching fields. The same three factors, Learning Capability, General Mainstreaming, and Traditional Limiting Disabilities, emerged from the analysis of each sample. Cronbach alpha reliability coefficients for the total scale were .89 and .88 for the two samples; those for the factors ranged from .76 to .84. Pearson product moment correlations between individual factors and total scale scores ranged from .81 to .86 with factor intercorrelations ranging from .42 to .55. These results provided enough evidence of the reliability and factorial validity of the ATMS to justify continued efforts to establish comprehensive normative data.

The Revised Ambiguity Tolerance Scale (AT-20), items 29-48 of the instrument, was selected to measure teachers' tolerance toward special needs students. The teachers indicated their response to each statement by indicating true or false. Each correct response was given a score of 4. A score of 80 would result if all items were answered correctly. MacDonald developed this scale by revising the Rydell-Rosen test which consisted of 16 true and false items and two items taken from the California Personality Inventory and two items from Barron's Conformity Scale. The internal consistency estimate for the 20-item test was computed at .86 and a reliability coefficient of .73 was obtained using the Kuder-Richardson 20 formula. The mean score for the 789 undergraduate students who comprised the sample was 10.51. To obtain a stability coefficient, the AT-20 was administered twice to 24 male undergraduates at six-month intervals. The correlation between administration was .63 ($p < .01$). Evidence of construct validity was reflected in the significant correlations between this scale and the Rokeach Dogmatism Scale (Form E), the Gough-Sanford Rigidity Scale, and the F Scale.

The Knowledge of Independent Living Skills test, items 49-88 of the instrument, was selected to measure teachers' knowledge of special needs students. The

teachers were requested to circle one of the four responses, A, B, C, or D, for each statement. Each correct answer was given a score of 5. A score of 200 would result if all items were answered correctly. The test was composed of five categories that focused on various areas: clothing, handicapping conditions (medical aspect), housing, food preparation, meal management, and management of persons. The knowledge test originally contained 80 questions. Prior to its use, the test was administered to 29 students in various disciplines at Ohio State University to determine the reliability and also to obtain data on each of the 80 items. The Kuder-Richardson 20 formula for reliability was .793. Questions which had a demonstration level of .20 or lower, were either dropped or reworded. The revised test consisted of 40 questions. Consequently, each of the five areas contained 8 items. The content validity of the test was determined by educators at Ohio State University.

Data Collection

Surveys were distributed to home economics teachers attending the 1984 Summer Vocational Workshop at the conference site during registration on Monday and Tuesday, August 6th and 7th, 1984 (Appendix A). A cover letter accompanied the questionnaire. The cover

letter included a statement of the problem, an explanation of the study, an appeal for participation, and a statement of appreciation to the respondent for participation in the study (Appendix B). The participants were instructed to return the completed questionnaires to the registration desk or to the facilitator at their respective regional meetings, on Thursday, August 9th. Of the 419 instruments distributed, 279 instruments were returned which was a response rate of 67%. All participants did not attend the regional meetings, and therefore did not return the questionnaire.

Data Analysis

The raw data obtained from the questionnaires were entered directly into a disk file using a terminal and the data analyses were done on the computer. Statistical analyses were used to determine differences in the following:

1. Teacher attitudes and knowledge
2. Demographic variables and attitudes toward the integration of special needs students in home economics programs
3. Demographic variables and knowledge of teachers
4. Teacher attitudes and tolerance

Descriptive statistics were used to summarize the data, and factorial analysis, analysis of variance techniques, and multiple regression analysis were used to test for relationships. A .05 level of significance was used throughout the study.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to determine the knowledge and attitudes of secondary home economics teachers towards the integration of special needs students in home economics programs. The teachers surveyed were the teachers who attended the 1984 Vocational Summer Workshop. Home economics teachers from the public schools in each of the eight educational regions in North Carolina were selected to participate in the study. A total of 419 instruments were distributed and of that number 279 (67%) instruments were returned.

In order to facilitate the presentation of the results, data were analyzed and presented as follows:

1. A description of the respondents according to
 - (a) region of employment, (b) sex, (c) race,
 - (d) age, (e) marital status, (f) educational level, (g) years of teaching experience,
 - (h) types of special needs students currently enrolled in home economics classes,
 - (i) preparation for teaching special needs

students, and (j) program funding for special needs students.

2. Test of hypotheses.

Description of Respondents by
Demographic Variables

A description of the respondents by demographic variables is presented in Table 1. See Appendix C for a map of the educational regions and Appendixes D through K for each demographic variable of respondents by region.

Of the 279 teachers, approximately 75% were from five of the educational regions. The greatest number of respondents was from Region IV. The fewest were from Region I which might be expected as it was the farthest distance from the city in which the conference was held.

The majority of teachers was 28 years of age or over, female, Caucasian, and married. Approximately 5% were less than 28 years of age. There was only one male teacher who responded. Black teachers comprised about 22% of the total. Approximately 15% of the teachers were not married.

Almost one-half, 47% of the teachers had a bachelor's degree plus additional hours. Approximately one-fourth of the teachers had only a bachelor's

Table 1

Description of Teachers Who Attended the Vocational
Summer Workshop by Demographic Variables

Variable	N-279	%
Age		
20-27 years	13	5
28-35 years	77	28
36-42 years	62	22
43-50 years	73	27
51 years	52	18
Nonresponses	2	1
Sex		
Male	1	0
Female	277	99
Nonresponses	1	0
Race		
Indian	5	2
Black	60	22
Caucasian	210	75
Hispanic	2	1
Nonresponses	2	1
Marital Status		
Single	23	8
Married	232	83
Widowed	7	2
Divorced/Separated	15	5
Nonresponses	2	1
Educational Level		
Bachelor's	75	27
Bachelor's plus additional hours	130	47
Master's	42	15
Master's plus additional hours	26	9
Doctorate	3	1
Nonresponses	3	1

Table 1 (continued)

Variable	N-279	%
Years of Teaching Experience		
0- 4	16	6
5- 9	53	19
10-14	65	23
15-19	47	17
20 years or more	96	34
Nonresponses	2	1
Preparation for Teaching Special Needs Students		
None	87	31
One college course	23	8
Two or more college courses	33	12
Inservice workshop	149	53
Other	15	5
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	68	24
No	191	69
Nonresponses	20	8

Note. Percentages were rounded to the nearest whole number.

degree, 15% had a master's degree, about 10% had a masters' degree plus additional hours and 1% of the teachers had a doctorate.

One third of the teachers had taught 20 years or more. Only 6% had less than five years of experience.

In the preparation for teaching special needs students, most of the teachers, 53% indicated that inservice workshops were the most common type of training received. Almost one-third of the teachers indicated that they had not received any preparation for teaching special needs students. Less than 25% of the teachers had taken one or more college courses.

In response to the question concerning funding being received by the home economics program for special needs students, the teachers responded by checking the appropriate answer, "yes" or "no". Over two-thirds of the teachers, 69% indicated that their program did not currently receive funding for special needs students. Approximately one-fourth of the teachers indicated that funding was currently being received by their program.

The learning disabled student was the most common type of special needs student taught by the home economics teachers (see Table 2). Over 75% of the teachers taught the learning disabled student. The EMR (emotionally mentally retarded) was the second most

Table 2

Description of Special Needs Students Enrolled In Home
Economics Classes

Category	N-279	%
EMR (emotionally mentally retarded)		
Yes	194	70
No	79	28
Nonresponses	6	2
TMR (trainable mentally retarded)		
Yes	66	24
No	207	74
Nonresponses	6	2
Speech Defects		
Yes	55	20
No	218	78
Nonresponses	6	2
Physically Handicapped		
Yes	77	28
No	196	70
Nonresponses	6	2
Hearing Impaired		
Yes	58	21
No	215	77
Nonresponses	6	2
Visually Impaired		
Yes	60	22
No	213	76
Nonresponses	6	2
Learning Disabled		
Yes	215	77
No	58	21
Nonresponses	6	2

Table 2 (continued)

Category	N-279	%
Emotionally Disturbed		
Yes	96	34
No	177	63
Nonresponses	6	2
Other		
Yes	9	3
No	264	95
Nonresponses	6	2

common type of special needs student taught. About 70% of the teachers taught the EMR student. It was indicated that over one-third of the teachers taught the emotionally disturbed student, and over one-fourth of the teachers taught the physically handicapped student. About one-fourth of the teachers taught the TMR (trainable mentally retarded). About 20% of the teachers taught the visually impaired, the hearing impaired, or students with speech defects. The teachers responded to the question by checking each category that applied.

For the attitudinal items see Appendix L for mean scores and standard deviations for each item 11-28. In responding to the statements which dealt with the feasibility of teaching normal and handicapped students in the same classroom, teachers agreed that hearing-impaired students who were not deaf, should be in regular classrooms. The teachers disagreed that deaf students should be in the regular classroom. In responding to the statements dealing with the feasibility of the least restrictive educational placement for various types of handicapped students, teachers agreed that the visually handicapped and the physically handicapped students should be in regular classrooms. Teachers also agreed that students with

epilepsy, speech difficult to understand, and students who stuttered should be in regular classrooms. Teachers did not agree that students with behavior disorders who could not readily control their own behavior or students who presented discipline problems should be in regular classrooms.

For the tolerance items, 29-48, each item was assigned a value of 4. Scores of the respondents ranged from 4-76 (see Appendix M). A mean score of 37.04 with a standard deviation of 12.47 for all respondents was obtained. Frequencies of each score are given in Appendix D. On the average, teachers answered approximately 49% of the items correctly, which indicated that teachers were not extremely tolerant.

For the knowledge items, 49-88, each item was assigned a value of 5. Scores of the respondents ranged from 20-155 (see Appendix N). A mean score of 121.20 with a standard deviation of 20.887 for all respondents was obtained. Frequencies of each score are given in Appendix N. For the knowledge items, there were 109, 39%, who failed to respond to this section of the instrument. Comments by the respondents were that the questions were too difficult for them to answer. This could indicate that the teacher's knowledge of ways to instruct or to provide for

students with special needs is deficient. Of the 170 teachers who responded to the items, approximately 80% of the items were answered correctly. For those teachers who did respond they were quite knowledgeable.

Test of Hypotheses

In this section, each hypothesis is presented with the data enumerated and examined, statistical procedures discussed, and results analyzed. The hypotheses tested were as follows:

Hypothesis 1: There is no significant difference in teachers' knowledge of special needs students when compared by

- (a) age
- (b) race
- (c) marital status
- (d) teaching experience
- (e) educational district

The data used as evidence to test the first hypothesis were the answers on items 1, 3, 4, 5, 7, and scores on items 49-88, of the survey instrument. These items related to (a) educational district, (b) race, (c) age, (d) marital status, (e) years of teaching experience, and (f) knowledge of special needs students.

In order to test the hypothesis, analysis of variance techniques were used. The results of the

Table 3

Analysis of Variance for Knowledge When Compared by
Age, Years of Teaching Experience, Race, Marital
Status, and Educational District

Variables	<u>F</u>	<u>df</u>	<u>p</u>
Age	.85	4 & 16	.49
Years of Teaching Experience	.77	4 & 16	.54
Race	4.32	3 & 17	.00*
Marital Status	.30	3 & 17	.82
Educational District	.92	7 & 13	.48

* $p < .05$

ANOVA can be seen in Table 3. The level of significance was $p < .05$. There was a significant difference in teachers' knowledge when compared by race, $F(3, 17) = 4.32$, $p < .05$. Caucasian teachers appeared to be the most knowledgeable. There was no significant difference in teachers' knowledge when compared by age, $F(4, 16) = .85$, $p < .05$. There was no significant difference in teachers' knowledge when compared by marital status, $F(3, 17) = .30$, $p < .05$. There was no significant difference in teachers' knowledge when compared by teaching experience, $F(4, 16) = .77$, $p < .05$. There was no significant difference in teachers' knowledge when compared by educational district, $F(7, 13) = .92$, $p < .05$.

A significant difference occurred in teachers' knowledge of special needs students when compared by race. Therefore, Hypothesis 1 was not fully rejected.

Hypothesis 2: There is no significant difference in teachers' attitudes toward the integration of special needs students when compared by

- (a) age
- (b) race
- (c) marital status
- (d) teaching experience
- (e) educational district

The data used as evidence to test Hypothesis 2 were the answers on items 1, 3, 4, 5, 7, and scores on

items 11-28 of the survey instrument. These items related to (a) age, (b) race, (c) marital status, (d) teaching experience, (e) educational district, and (f) attitudes toward the integration of special needs students into the classroom.

In order to test the hypothesis, a factorial analysis was done on the attitudinal items, which were items 11-28 of the survey instrument. The factorial analysis was done to determine the effect of the independent variable and the control variable, both separately and in combination. The factoring procedure yielded two potentially measurable constructs as factors, although four factors emerged. The measurable constructs were referred to as Factor I, Learning Capability and Factor II, General Mainstreaming. Statements correlating with the factor Learning Capability dealt with disabilities which do not necessarily impede academic progress. The factor General Mainstreaming included statements on the general topic of mainstreaming as well as statements on the disability categories of educable mentally retarded (EMR) and social-emotional problems. Moderate factor intercorrelations indicated that the two factors were reasonably independent. Factor I included items 15, 19, 20, 22, 23, 24, and 25 of the survey instrument. Factor II included items 11, 12, 13, 14, 26, 27, and 28

of the survey instrument. Appendix K presents the item numbers, total score means, standard deviations, and cases for the factorial analysis. The pattern, structure, and factor correlation matrixes are presented in Appendixes O, P, and Q.

Factor I and Factor II were used in the analysis of variance to test Hypothesis 2. The results of the ANOVAs can be seen in Tables 4 and 5. In the analysis of variance, Factor I was called LEARN for Learning Capability and Factor II was called STREAM for General Mainstreaming. When comparing teachers' attitudes toward general mainstreaming of special needs students, there was no significant difference in teachers' attitudes when compared by age, $F(4, 16) = 1.33, p < .05$. There was no significant difference in teachers' attitude when compared by race, $F(3, 17) = .25, p < .05$. There was no significant difference in teachers' attitudes when compared by marital status, $F(3, 17) = .64, p < .05$. There was no significant difference in teachers' attitudes when compared by teaching experience, $F(4, 16) = .43, p < .05$. There was no significant difference in teachers' attitude when compared by educational district, $F(7, 13) = 1.4, p < .05$.

When comparing teachers attitudes concerning learning capability of special needs students, there

Table 4

Analysis of Variance for Attitudes Toward General
Mainstreaming of Special Needs Students When Compared
By Age, Years of Teaching Experience, Race, Marital
Status and Educational District

<u>Variables</u>	<u>F</u>	<u>df</u>	<u>p</u>
Age	1.33	4 & 16	.25
Years of Teaching Experience	.43	4 & 16	.78
Race	.25	3 & 17	.86
Marital Status	.64	3 & 17	.58
Educational District	1.44	7 & 13	.18

Table 5

Analysis of Variance for Attitudes Toward Learning
Capability of Special Needs Students When Compared By
Age, Years of Teaching Experience, Race, Marital
Status, and Educational District

<u>Variables</u>	<u>F</u>	<u>df</u>	<u>p</u>
Age	1.28	4 & 16	.27
Years of Teaching Experience	2.04	4 & 16	.08
Race	3.27	3 & 17	.02*
Marital Status	.90	3 & 17	.44
Educational District	1.00	7 & 13	.43

* $p < .05$

was a significant difference in teachers' attitudes when compared by race, $F(3, 17) = 3.2, p < .05$. Black teachers had a more positive attitude toward special needs students than did teachers of other races. There was no significant difference in teachers' attitudes when compared by age, $F(4, 16) = 1.2, p < .05$. There was no significant difference in teachers' attitudes when compared by marital status, $F(3, 17) = .90, p < .05$. There was no significant difference in teachers' attitudes when compared by teaching experience, $F(4, 16) = 2.04, p < .05$, or by educational district, $F(7, 13) = 1.00, p < .05$.

A significant difference occurred in teachers' attitudes when compared by race. Therefore, Hypothesis 2 was not fully rejected.

Hypothesis 3: There is no significant relationship between teachers' knowledge of special needs students and their attitudes toward the integration of special needs students in home economics programs.

Multiple regression analysis was performed to determine if a relationship existed between teachers' knowledge and attitudes toward the integration of special needs students in home economics programs.

Multiple regression analysis was performed for the two attitudinal variables, (a) LEARN (attitudes toward learning capabilities) and (b) STREAM (attitudes toward

concepts of mainstreaming). A significant relationship existed between teachers' knowledge and attitudes towards learning capabilities. There was a significant difference in the overall model, LEARN, $F = (3, 140) = .0025, p < .05$ (see Table 6). The t test revealed that the source of significant F was knowledge, $t = .00 < .05$. Teachers who were more knowledgeable appeared to have more positive attitudes toward the learning capabilities of special needs students. There was no significant relationship between teachers' knowledge and their attitudes toward the concepts of mainstreaming, $t = .44 < .05$. In the overall model, STREAM, $F = (3, 140) = .03 < .05$ (see Table 7). The t test revealed that the source of significant F was educational level instead of knowledge. Teachers with higher educational levels appeared to have more positive attitudes toward the concepts of mainstreaming than those with lower educational levels. As a result of the existing relationship between teachers' knowledge and attitudes toward learning capabilities, Hypothesis 3 was not fully rejected.

Hypothesis 4: There is no significant relationship between tolerance of teachers and teachers' attitudes towards the integration of special needs students in home economics programs.

Table 6

Multiple Regression Analysis For Knowledge and
Attitudes of Teachers Toward Learning Capabilities of
Special Needs Students

Analysis of Variance

	DF	Sum of Squares	Mean Squares
Regression	3	500.29065	166.76355
Residual	140	4654.64685	33.24748
F = 5.01583	SIGNIF	F = .0025*	

Summary Statistics for the Equation

Multiple R	.31153
R Square	.09705
Adjusted R Square	.07770
Standard Error	5.76606

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Educational Level	-.33171	.48704	-.05607	-.681	.4969
Knowledge	-.08553	.02399	-.28824	-3.566	.0005*
Tolerance	-.04901	.03825	-.10489	-1.281	.2023
(Constant)	31.56161	3.40181		9.278	.0000

*p<.05

Table 7

Multiple Regression Analysis For Knowledge and
Attitudes of Teachers Toward General Mainstreaming of
Special Needs Students

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	3	188.11927	62.70642
Residual	140	2955.63073	21.11165
F = 2.97023	SIGNIF	F = .0340*	

Summary Statistics for the Equation

Multiple R	.24462
R Square	.05984
Adjusted R Square	.03969
Standard Error	4.59474

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Educational Level	-.84833	.38810	-.18363	-2.186	.0305*
Knowledge	-.01462	.01911	-.6310	-.765	.4456
Tolerance	-.04557	.03048	-.12489	-1.495	.1372
(Constant)	21.67433	2.71076		7.996	.0000

*p<.05

Multiple regression analysis was performed to determine if a relationship existed between teachers tolerance and attitudes toward the integration of special needs students in home economics programs. Multiple regression analysis was performed for each of the two attitudinal variables, (a) LEARN (attitudes toward learning capabilities and (b) STREAM (attitudes toward the concepts of mainstreaming). A significant relationship existed between tolerance of teachers and teachers' attitudes towards the concepts of mainstreaming $t = .05 < .05$ (see Tables 8 and 9). A significant relationship existed when either tolerance or STREAM was constant. Teachers who appeared to be the most tolerant had the most positive attitudes toward the concepts of mainstreaming. There was no significant relationship between teachers' tolerance and teachers' attitudes toward learning capabilities, $t = .15 < .05$ (see Tables 10 and 11). Therefore, Hypothesis 4 was not completely rejected.

DISCUSSION

Results of this study revealed that factor analytic procedures yielded two essentially identical factors for the sample as did the study by Berryman, Neal, and Robinson (1980). In the study, the factors Learning Capability and General Mainstreaming emerged

Table 8

Multiple Regression Analysis For Tolerance and
Attitudes of Teachers Toward General Mainstreaming of
Special Needs Students With Tolerance as the Constant

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	81.47421	81.47421
Residual	142	3062.27579	21.56532
F = 3.77802	SIGNIF	F = .0539*	

Summary Statistics for the Equation

Multiple R	.16099
R Square	.02592
Adjusted R Square	.01906
Standard Error	4.64385

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Tolerance	-.05874	.03022	-.16099	-1.944	.0539*
(Constant)	18.62197	1.17950		15.801	.0000

*p<.05

Table 9

Multiple Regression Analysis for Tolerance and
Attitudes of Teachers Toward General Mainstreaming of
Special Needs Students With STREAM as the Constant

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	611.93447	611.93447
Residual	142	23000.06553	161.97229
F = 3.77802	SIGNIF	F = .0539*	

Summary Statistics for the Equation

Multiple R	.16099
R Square	.02592
Adjusted R Square	.01906
Standard Error	12.72683

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Stream	-.44119	.22698	-.16099	-1.944	.0539*
(Constant)	44.09463	3.88342		11.355	.0000

*p<.05

Table 10

Multiple Regression Analysis for Tolerance and
Attitudes of Teachers Toward Learning Capabilities of
Special Needs Students With Tolerance As the Constant

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	74.85898	74.85898
Residual	142	5080.07852	35.77520
F = 2.09248	SIGNIF	F = .1502	

Summary Statistics for the Equation

Multiple R	.12051
R Square	.01452
Adjusted R Square	.00758
Standard Error	5.98124

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Tolerance	-.05631	.03892	-.12051	-1.447	.1502
(Constant)	20.71978	1.51789		13.650	.0000

Table 11

Multiple Regression Analysis for Tolerance and
Attitudes of Teachers Toward Learning Capabilities of
Special Needs Students With LEARN as the Constant

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	342.88878	342.88878
Residual	142	23269.11122	163.86698
F = 2.09248	SIGNIF	F = .1502	

Summary Statistics for the Equation

Multiple R	.12051
R Square	.01452
Adjusted R Square	.00758
Standard Error	12.80105

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
Learn	-.25791	.17829	-.12051	-1.447	.1502
(Constant)	41.64224	3.49138		11.927	.0000

thus demonstrating sufficiently high reliability coefficients to indicate adequate internal consistency. There was a moderate approval of mainstreaming by the teachers. The results of this study also indicated a moderate approval of mainstreaming by teachers. Berryman, Neal, and Robinson (1980) found no significant differences in teachers' attitudes when compared by years of teaching. The present study did not find a positive relationship between attitude and teaching experience.

Redick (1974) found no significant relationship between attitudes and knowledge of handicapping conditions. Burdette (1982) did not find a positive relationship between attitudes and knowledge of independent living skills of handicapped persons. The present study did find a significant positive relationship between teachers' knowledge of independent living skills of handicapped persons and attitudes.

Harasymiw and Horne (1975) indicated that teachers' attitudes toward the handicapped were related to a variety of demographic variables such as age and educational experience. However, there were no significant differences found for educational experience. Significant differences were found when age was compared to attitudes. Younger teachers had more positive attitudes toward exceptional children

than did older teachers. The present study indicated that no significant differences existed in teachers' attitudes when compared by age, and educational experience.

Asselin (1982) found that teaching experience and education had no effect on teachers' knowledge or attitudes. This study also found that teaching experience did not have an effect on teachers' knowledge and attitudes.

Redick (1974) found that teachers with advanced degrees tended to score higher on the knowledge instrument. The findings of this study indicated similar results. Teachers with the higher educational levels appeared to be more knowledgeable than those with less education.

CHAPTER V

SUMMARY AND IMPLICATIONS

The purpose of this study was to determine the knowledge and attitudes of secondary home economics teachers toward the integration of special needs students in home economics programs. The target population was vocational home economics teachers employed in the public schools within the state of North Carolina during 1983-84. The population was further defined as those home economics teachers who attended the 1984 Vocational Summer Workshop. The teachers were grouped according to the educational region in which they were employed. The number of teachers attending the workshop from each region provided the basis for the number of participants.

Each teacher received a questionnaire designed to obtain data on the knowledge, attitudes, and tolerance of teachers toward the integration of special needs students in home economics programs. The demographic information requested region of employment, sex, race, age, marital status, educational level, years of teaching experience, type of special needs students taught, preparation for teaching special needs

students, and funding received for special needs students. Responses to selected demographic variables were compared to knowledge and attitudes of teachers by regions. Responses to the knowledge variables were compared to attitude. Also compared were the responses to the attitudinal variables and tolerance. Two hundred and seventy-nine teachers returned the questionnaires, which was 67% of the total.

The analysis of the data involved both descriptive and inferential statistics. Data were obtained from the responses to the four sections of the survey instrument which included information on (a) demographic characteristics, (b) attitudes, (c) tolerance, and (d) knowledge.

Numbers and percentages were computed for responses to each of the items contained in the demographic section of the instrument. The hypotheses were tested utilizing a factorial analysis, analysis of variance; and multiple regression techniques.

Major Findings

Some of the major findings of this study were as follows:

1. The majority of the teachers were female.

There was only one male respondent.

2. The majority of the teachers were Caucasian.
Of those sampled, 73.8% were Caucasian. Less than 3% were Indian and Hispanic.
3. Over one-half of the teachers were between the ages of 27 and 50. Less than 5% of the teachers were in the 20-27 years of age category.
4. The majority of the teachers were married.
Over 80% of the teachers were married.
5. Almost one-half of the teachers had a bachelor's degree plus additional hours.
About 14% of the teachers had a masters' degree and 1% had a doctorate.
6. Approximately one-third of the teachers had 20 years or more years of teaching experience.
Less than 8% of the teachers had 0-4 years of experience.
7. The learning-disabled student was the most common type of special needs student taught by the home economics teachers. Over 75% of the teachers taught students with learning disabilities. The EMR (emotionally mentally retarded) was the second most common type of special needs student taught. About 70% of those sampled taught the EMR student.

8. Over one-half of the teachers indicated that inservice workshops were the most common type of training received. Thirty percent of the teachers indicated that they had not received any preparation for teaching special needs students.
9. The majority of teachers indicated that their program did not currently receive funding for special needs students. Approximately one-fourth of the teachers indicated that funding was being received by their program for special needs students.
10. There was a significant difference in teachers' knowledge when compared by race. Caucasian teachers appeared to be the most knowledgeable concerning special needs students.
11. There was a significant difference in teachers' attitudes when compared by race. Black teachers had a more positive attitude toward special needs students than did teachers of other races.
12. There was a significant relationship between teachers' knowledge of special needs students and their attitudes toward the integration of special needs students.

A significant relationship existed between teachers' knowledge and attitudes toward learning capabilities. Teachers who were more knowledgeable appeared to have more positive attitudes toward the learning capabilities of special needs students.

13. There was a significant relationship between teachers' educational level and their attitudes toward the concepts of mainstreaming. Teachers with the higher educational levels appeared to have more positive attitudes toward the concepts of mainstreaming than those with lower educational levels.
14. A significant relationship existed between the tolerance of teachers and teachers' attitudes toward the concepts of mainstreaming. Teachers who appeared to be the most tolerant had the most positive attitudes toward the concepts of mainstreaming.

Hypotheses Tested

The four hypotheses tested were as follows:

Hypothesis 1: There is no significant difference in teachers' knowledge of special needs students when compared by

- (a) age
- (b) race
- (c) marital status
- (d) teaching experience
- (e) educational district

There was no significant difference in teachers' knowledge when compared by age, marital status, teaching experience, and educational district. There was a significant positive difference, however, in teachers' knowledge when compared by race. Therefore, Hypothesis 1 was not fully rejected.

Hypothesis 2: There is no significant difference in teachers' attitudes toward the integration of special needs students when compared by

- (a) age
- (b) race
- (c) marital status
- (d) teaching experience
- (e) educational district

There was no significant difference in teachers' attitudes when compared by age, marital status, teaching experience, and educational district. However, there was a significant positive difference in teachers' attitudes when compared by race. Therefore, Hypothesis 2 was not fully rejected.

Hypothesis 3: There is no significant relationship between teachers' knowledge of special needs students and their attitudes toward the integration of special needs students in home economics programs.

There was a significant relationship between teachers' knowledge and attitudes toward the integration of special needs students in home economics programs. A significant positive relationship existed between teachers' knowledge and attitudes toward learning capabilities. However, there was no significant relationship between teachers' knowledge and their attitudes toward the concepts of mainstreaming. But there was a significant positive relationship between teachers' educational level and their attitudes toward the concepts of mainstreaming. As a result of the significant relationships shown, Hypothesis 3 was not fully rejected.

Hypothesis 4: There is no significant relationship between tolerance of teachers and teachers' attitudes toward the integration of special needs students in home economics programs.

There was a significant relationship between the tolerance of teachers and teachers' attitudes toward the integration of special needs students in home economics programs. A significant positive relationship existed between the tolerance of teachers and teachers' attitudes toward the concepts of mainstreaming. However, there was no significant

positive relationship between tolerance and teachers' attitudes toward learning capabilities. Therefore, Hypothesis 4 was not completely rejected.

IMPLICATIONS

The findings were interpreted and the implications were stated with an awareness of the limitations that existed in this study. Implications resulting from the study may provide a frame of reference for those responsible for planning education programs for home economics teachers. Implications drawn from the study were grouped in two categories: (1) planning educational programs and (2) further research.

Planning Educational Programs

1. Since nearly 40% of the teachers did not answer the knowledge items, it appears that there is a need for inservice education. Of those who did respond to these questions, about 80% of the questions were answered correctly.

2. Since a majority of the teachers indicated that they taught students with learning disabilities, inservice workshops could be beneficial. Over 70% of the teachers taught students with learning disabilities and EMR students.

3. The funding of home economics programs for special students should be encouraged.

4. If incentives were provided for home economics teachers to increase their educational status, they might develop a more positive attitude toward the concepts of mainstreaming. It appeared that teachers with higher educational levels had more positive attitudes toward the concepts of mainstreaming. Teachers who were more knowledgeable appeared also to have more positive attitudes toward students with special needs.

5. Courses could be required or made readily available for preservice and inservice instruction to better prepare teachers for teaching roles. Less than 25% of the teachers had had formal instruction related to teaching students with special needs. Over 50% of the teachers indicated that they had attended workshops related to special needs students.

6. If preservice home economics education students were provided experiences working with special needs students, they might develop a more positive attitude toward the concepts of mainstreaming.

Further Research

Based upon the findings of this study, the following recommendations are made:

1. In similar study, compare teachers' knowledge with tolerance.
2. Compare home economics teachers' knowledge and attitudes toward teaching special needs students with the knowledge and attitudes of teachers in other vocational areas such as agriculture, business education, or industrial arts.
3. Compare knowledge and attitudes of home economics teachers before and after attending a workshop on teaching special needs students.
4. Conduct a longitudinal study of home economics teachers to determine whether their attitudes and tolerance levels toward students with special needs changes.
5. Study the perceptions held by students toward special needs students in the regular classroom.
6. Study the perceptions of special needs students placed in regular classrooms.

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APPENDIX A
QUESTIONNAIRE

Knowledge and Attitudes Toward Students with Special Needs

The purpose of this study is to determine the knowledge and attitudes of secondary home economics teachers toward special needs students. Special needs students are defined as persons who are mentally, emotionally, or physically handicapped, visually or hearing impaired, and with speech defects. These persons may require special education and related services and because of their special needs, may not be able to succeed in the regular home economics program without special assistance or a modification in the regular home economics program.

DIRECTIONS:

For items 1-10, please place a check (✓) in the blank provided on the left to indicate your response to each item.

1. Region in which you are employed.
 - ☐ Region I
 - ☐ Region II
 - ☐ Region III
 - ☐ Region IV
 - ☐ Region V
 - ☐ Region VI
 - ☐ Region VII
 - ☐ Region VIII
2. Sex
 - ☐ Male
 - ☐ Female
3. Race
 - ☐ American Indian
 - ☐ Black
 - ☐ Caucasian
 - ☐ Hispanic
 - ☐ Other, specify _____
4. Age
 - ☐ 20-27 years of age
 - ☐ 28-35 years of age
 - ☐ 36-42 years of age
 - ☐ 43-50 years of age
 - ☐ 51 years of age or older
5. Marital Status
 - ☐ Single
 - ☐ Married
 - ☐ Widowed
 - ☐ Divorced/Separated
6. Highest educational level you have achieved
 - ☐ Bachelor's
 - ☐ Bachelor's plus additional hours
 - ☐ Master's
 - ☐ Master's plus additional hours
 - ☐ Doctorate
7. Years of teaching experience
 - ☐ 0-4
 - ☐ 5-9
 - ☐ 10-14
 - ☐ 15-19
 - ☐ 20 years or more
8. Special needs students that are currently enrolled in your classes. (Check all that apply)
 - ☐ EMR (Emotionally Mentally Retarded)
 - ☐ TMR (Trainable Mentally Retarded)
 - ☐ Speech Defects
 - ☐ Physically Handicapped
 - ☐ Hearing Impaired
 - ☐ Visually Impaired
 - ☐ Learning Disabled
 - ☐ Emotionally Disturbed
 - ☐ Other, specify _____
9. Preparation for teaching special needs students.
 - ☐ None
 - ☐ One college course
 - ☐ Two or more college courses
 - ☐ Inservice workshop
 - ☐ Other, specify _____
10. Does your program presently receive funding for special needs students?
 - ☐ Yes
 - ☐ No

Below are statements about "mainstreaming" where handicapped students become the responsibility of the regular classroom teacher to the greatest extent possible. Please circle the number after each statement which represents your level of agreement.

1	2	3	4	5	6
Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree

11. In general, mainstreaming is a desirable educational practice. 1 2 3 4 5 6
12. Students should have the right to be in regular classrooms. 1 2 3 4 5 6
13. It is feasible to teach gifted, normal, and mentally retarded students in the same class. 1 2 3 4 5 6

Continued

In responding to the following items, circle the T for each true statement and F for each false statement.

- | | | |
|---|-------------|--|
| 14. Educable mentally retarded students should be in regular classrooms. | 1 2 3 4 5 6 | |
| 15. Visually handicapped students who can read standard printed material should be in regular classrooms. | 1 2 3 4 5 6 | T F 29. A problem has little attraction for me if I don't think it has a solution. |
| 16. Blind students who cannot read standard printed material should be in regular classrooms. | 1 2 3 4 5 6 | T F 30. I am just a little uncomfortable with people unless I feel that I can understand their behavior. |
| 17. Hearing impaired students, who are not deaf, should be in regular classrooms. | 1 2 3 4 5 6 | T F 31. There is a right way and a wrong way to do almost everything. |
| 18. Deaf students should be in the regular classrooms. | 1 2 3 4 5 6 | T F 32. I would rather bet 1 to 6 on a long shot than 3 to 1 on a probable winner. |
| 19. Physically handicapped students confined to wheelchairs should be in regular classrooms. | 1 2 3 4 5 6 | T F 33. The way to understand complex problems is to be concerned with their larger aspects instead of breaking them into smaller pieces. |
| 20. Physically handicapped students not confined to wheelchairs should be in regular classrooms. | 1 2 3 4 5 6 | T F 34. I get pretty anxious when I'm in a social situation over which I have no control. |
| 21. Students with cerebral palsy who cannot control movement of one or more limbs should be in regular classrooms. | 1 2 3 4 5 6 | T F 35. Practically every problem has a solution. |
| 22. Students who stutter should be in regular classrooms. | 1 2 3 4 5 6 | T F 36. It bothers me when I am unable to follow another person's train of thought. |
| 23. Students with speech difficult to understand should be in regular classrooms. | 1 2 3 4 5 6 | T F 37. I have always felt that there is a clear difference between right and wrong. |
| 24. Students with epilepsy should be in regular classrooms. | 1 2 3 4 5 6 | T F 38. It bothers me when I don't know how other people react to me. |
| 25. Students with diabetes should be in regular classrooms. | 1 2 3 4 5 6 | T F 39. Nothing gets accomplished in this world unless you stick to some basic rules. |
| 26. Students with behavior disorders who cannot readily control their own behavior should be in regular classrooms. | 1 2 3 4 5 6 | T F 40. If I were a doctor, I would prefer the uncertainties of a psychiatrist to the clear and definite work of someone like a surgeon or X-ray specialist. |
| 27. Students who present persistent discipline problems should be in regular classrooms. | 1 2 3 4 5 6 | T F 41. Vague and impressionistic pictures really have little appeal for me. |
| 28. Mainstreaming will be sufficiently successful to be retained as a required educational practice. | 1 2 3 4 5 6 | T F 42. If I were a scientist, it would bother me that my work would never be completed (because science will always make new discoveries). |
| | | T F 43. Before an examination, I feel much less anxious if I know how many questions there will be. |

Continued

- T F 44. The best part of working a jigsaw puzzle is putting in the last piece.
- T F 45. Sometimes I rather enjoy going against rules and doing things I'm not supposed to do.
- T F 46. I don't like to work on a problem unless there is a possibility of coming out with a clear-cut unambiguous answer.
- T F 47. I like to fool around with new ideas, even if they turn out later to be a total waste of time.
- T F 48. Perfect balance is the essence of all good composition.

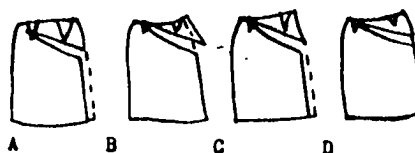
Read each of the following statements. Place the letter of the one best answer on the blank to the left of the statement--A, B, C, or D.

- 49. The following fitting irregularity not associated with children using crutches is
A. no defined waistline.
B. heavy thighs.
C. muscular shoulders.
D. short legs.
- 50. The disabling condition not associated with muscular dystrophy is
A. unstable balance.
B. spasms during dressing.
C. raising arms above head.
D. fitting clothing over braces.
- 51. The three most important factors to consider when analyzing clothing problems are
A. physical ability, sewing ability, individual tastes.
B. fashion preferences, fit, figure problems.
C. comfort, cost, care.
D. functional problems, figure problems, clothing preferences.
- 52. A paraplegic client is uncomfortable with the fit and displeased with the appearance of his pants: the following suggestion could be made for adapting his present pants.



- A Shorten pants in center front, add on in center back
- B Shorten pants in center front.
- C Add a wedge of fabric below waistband.
- D Shorten pants at the center back.

- 53. A five year old girl has ataxic cerebral palsy with good use of her right hand, but only assisted use of the left hand, and stiffness of the left arm. What three suggestions would you make to develop an interest in independent dressing?
A. pull-over top, elastic casing pants, bright colors.
B. large buttons, raglan sleeves, elastic casing pants.
C. slipper with decorative pull, raglan sleeves, loose fit.
D. two-piece outfit, pressure tape openings, raglan sleeves.
- 54. The preferred alteration for an asymmetric hip would look like the following



- 55. The garment opening requiring the least amount of elbow joint movement to operate
A. front neckline zipper.
B. wrap jumper.
C. side waistline zipper.
D. back zipper.
- 56. To avoid drawing attention to an undesirable focal point use
A. a solid color near the focal point, a print elsewhere.
B. a print near the focal point, or solid color elsewhere.
C. a close fitting garment around the focal point.
D. sharp contrasting colors next to each other.
- 57. The blind
A. have superior acuity.
B. pay attention to auditory cues more than do seeing people.
C. develop a sixth sense.
D. have superior musical ability.
- 58. Studies by means of interviews, observations, and reports of information indicate that physically disabled persons are
A. better adjusted than normal persons.
B. as well adjusted as normal persons.
C. all maladjusted.
D. more frequently maladjusted than physically normal persons.
- 59. The attitudes of parents toward their disabled children tend to be
A. oversolicitous, rejecting.
B. accepting, understanding.
C. the same as toward their normal children.
D. more positive than toward their normal children.

Continued

- __60. A paralysis or partial paralysis of the lateral half of the body is called
 A. paraplegia.
 B. hemiplegia.
 C. tetraplegia.
 D. quadriplegia.
- __61. A chronic, progressive, neurological disease causing extreme weakness, lack of balance, and numbness of the body is
 A. muscular dystrophy
 B. multiple sclerosis.
 C. scoliosis.
 D. cerebral palsy.
- __62. Deaf people are just like other people except they have a hearing loss. This statement is not true because it does not address
 A. the problem of communication.
 B. the loneliness of the handicap which may limit some personal relationships to various degrees.
 C. the development of personality with limited language and verbal input.
 D. all of the above.
- __63. During a group gathering, where should a hearing-impaired person be seated?
 A. anywhere, since it does not matter.
 B. in the front of the room.
 C. in a semi-circle or "u"
 D. in one of the rows.
- __64. One of the most important things to remember in communicating with a hearing-impaired person is
 A. to maintain eye contact during the time you are talking to him/her so he/she can read your lips.
 B. to demonstrate all ideas.
 C. to write your messages to the hearing-impaired person.
 D. use hand gestures.
- __65. What type of door handle would be easier for a handicapped person to operate?
 A. door knob.
 B. lever-type door handle.
 C. automatic door-opening devices.
 D. both B and C.
- __66. Disabled people in wheelchairs need electric outlets that are
 A. 50" from the floor.
 B. along the baseboard.
 C. 36" from the floor.
 D. 26" from the floor.
- __67. Jan has little strength in both of her arms and hands. Which type of window would be the best to have in her kitchen?
 A. double-hung.
 B. bow.
 C. sliding.
 D. casement.
- __68. It is very important for people with limited mobility or balance problems to have a shower stall that contain (s)
 A. a flexible shower hose.
 B. a sturdy seat.
 C. grab bars.
 D. all of the above.
- __69. People in wheelchairs need the doorways to be at least
 A. 36" wide.
 B. 28" wide.
 C. 31" wide.
 D. 22" wide.
- __70. The minimum width for ramps is
 A. 61" wide.
 B. 55" wide.
 C. 48" wide.
 D. 39" wide.
- __71. Most disabled persons with mobility problems need all the following except
 A. remote-controlled switches for lights, radio, television, etc.
 B. living arrangements on one floor if possible.
 C. hallways and doorways wider than normal.
 D. a nurse that is continuously with them.
- __72. If elevators are used, they should have all the following except
 A. enough space for a wheelchair.
 B. a computerized voice.
 C. a raised letter or number that indicates floor.
 D. both visible and audible signals indicating arrival and direction of travel.
- __73. Low energy can be a very real handicap for people with multiple sclerosis or rheumatoid arthritis. People with any disease that leaves them fatigued should do all the following except
 A. when preparing a recipe, first gather all ingredients and equipment.
 B. take short rests periods between activities.
 C. finish all jobs quickly so that they can rest.
 D. limit the number of strenuous jobs completed each day.
- __74. A physically handicapped person with limited hand strength will open easier a
 A. flip top box and pull-tab container.
 B. perforated indentation container and can.
 C. pull strip container and a jar.
 D. plastic wrapper and a bottle.
- __75. For limited use of hand and in-coordination use
 A. mugs and cups with large handles.
 B. heavy eating utensils.
 C. any kind of dinnerware.
 D. lightweight glasses.

Continued

- __76. The criteria for evaluating equipment used by the handicapped includes all the following except
- safety.
 - ease of care.
 - multi-purposes.
 - appearance.
- __77. Vegetable preparation is often a very difficult task for those who have a limited grasp. The best thing for them to do is
- always find somebody to prepare the vegetables.
 - eliminate having to prepare vegetables.
 - just to keep working until vegetable is prepared.
 - purchase a handy device that will aid in preparing vegetables.
- __78. Pans used by the handicapped should have all the following characteristics except
- flat bottomed.
 - heavy with a short handle.
 - lightweight for limited use of hand.
 - rounded inside to make cleaning easier.
- __79. A handicapped person that has limited hand or limited strength should use
- a lightweight bowl for mixing.
 - a heavy bowl for mixing.
 - any type since it does not really matter.
 - none of the above.
- __80. All of the following are storage guidelines for the handicapped except
- determine total storage space.
 - discard unused articles.
 - stack items to make more room.
 - store articles where used first.
- __81. Which of the following statements is true concerning employment of disabled persons?
- incomes for disabled people are usually lower than for nondisabled people.
 - jobs commonly held by the disabled are those that have relatively low education requirements.
 - handicapped people are two often categorized as being incapable of employment.
 - all of the above.
- __82. The demands of handicapping conditions on families and the availability of resources to meet them vary according to
- sex of the handicapped person.
 - role of the handicapped person.
 - age of the handicapped person.
 - none of the above.
- __83. Evidence shows that values of families where there is a disability are
- similar to those of other families.
 - extremely unlike those of other families.
 - not like those of other families.
 - just like those of other families.
- __84. Within the personal subsystem, a major influence on the management of the household is
- how community views disability.
 - acceptance of disabled person in the community.
 - acceptance of a disabled person in the household.
 - none of the above.
- __85. In a family with a disabled member, the most important matter related to decision-making patterns is
- who the "breadwinner" is
 - who has control of family resources
 - who the homemaker is
 - the handicapped person's condition and concept of his/her role.
- __86. Patterns regarding decision-making responsibility usually change
- little if the mother is the disabled.
 - a great amount if the mother is the disabled.
 - little if the father is the disabled.
 - a great amount if a young child is the disabled.
- __87. The level of education prior to the disability affects
- earning power after disability.
 - attitude toward work.
 - independence.
 - all of the above.
- __88. The ability of families with handicapped members to manage effectively is often influenced by
- availability of extended family.
 - social services available.
 - community assistance and acceptance.
 - all of the above.
- __82. The demands of handicapping conditions on families and the availability of resources to meet them vary according to
- sex of the handicapped person.
 - role of the handicapped person.
 - age of the handicapped person.
 - none of the above.

If you wish to have a summary of the results, please give your name and address.

Thank you for your cooperation.

APPENDIX B
COVER LETTER

THE UNIVERSITY OF NORTH CAROLINA⁹⁶
AT GREENSBORO

School of Home Economics

August 6, 1984



Dear Home Economics Teacher:

A study is being conducted to determine the knowledge and attitudes of home economics teachers toward students with special needs. This information will be useful in planning preservice and inservice programs for teachers.

Please answer every item on the questionnaire. The questionnaires will be collected as you enter the Regional Meeting on Thursday morning.

Thank you for your cooperation.

Sincerely,

Jackie Webb

Jackie D. Webb
Doctoral Student
Home Economics Education

Mildred Johnson

Mildred Johnson
Professor
Home Economics Education

GREENSBORO, NORTH CAROLINA / 27412-5001

THE UNIVERSITY OF NORTH CAROLINA is composed of the sixteen public senior institutions in North Carolina
an equal opportunity employer

APPENDIX C
MAP OF EDUCATIONAL REGIONS IN
NORTH CAROLINA

[illegible]

APPENDIX D
DESCRIPTION OF TEACHERS IN REGION I
BY DEMOGRAPHIC VARIABLES

APPENDIX D

Description Of the Teachers In Region I Who Attended
The Vocational Summer Workshop by Demographic Variables

Variable	N = 20	%
Age		
20-27 years	0	0
28-35 years	7	35
36-42 years	6	30
43-50 years	3	15
51 years and older	4	20
Nonresponses	0	0
Sex		
Male	0	0
Female	20	100
Nonresponses	0	0
Race		
Indian	0	0
Black	5	25
Caucasian	15	75
Hispanic	0	0
Other	0	0
Marital Status		
Single	3	15
Married	15	75
Widowed	0	0
Divorced/Separated	0	0
Nonresponses	1	5
Educational Level		
Bachelor's	6	30
Bachelor's plus additional hours	9	45
Master's	4	20
Master's plus additional hours	1	5
Doctorate	0	0
Nonresponses	0	0

APPENDIX D (continued)

Variable	N = 20	%
Years of Teaching Experience		
0- 4	1	5
5- 9	7	35
10-14	1	5
15-19	2	10
20 years or more	8	40
Nonresponses	1	5
Preparation for Teaching Special Needs Students		
None	4	20
One college course	1	5
Two or more college courses	1	5
Inservice workshop	13	65
Other	4	20
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	7	35
No	12	60
Nonresponses	1	5

APPENDIX E
DESCRIPTION OF THE TEACHERS IN REGION II
BY DEMOGRAPHIC VARIABLES

APPENDIX E

Description Of Teachers In Region II Who Attended the
Vocational Summer Workshop by Demographic Variables

Variable	N = 37	%
Age		
20-27 years	1	3
28-35 years	13	35
36-42 years	6	16
43-50 years	10	27
51 years and older	7	19
Nonresponses	0	0
Sex		
Male	0	0
Female	37	100
Nonresponses	0	0
Race		
Indian	0	0
Black	12	37
Caucasian	25	68
Hispanic	0	0
Other	0	0
Marital Status		
Single	5	14
Married	27	73
Widowed	2	5
Divorced/Separated	3	8
NonResponses	1	3
Educational Level		
Bachelor's	11	30
Bachelor's plus additional hours	17	46
Master's	6	16
Master's plus additional hours	3	8
Doctorate	0	0
Nonresponses	0	0

APPENDIX E (continued)

Variable	N = 37	%
Years of Teaching Experience		
0- 4	1	3
5- 9	3	8
10-14	13	35
15-19	4	11
20 years or more	16	43
Nonresponses	0	0
Preparation for Teaching Special Needs Students		
None	11	30
One college course	4	11
Two or more college courses	5	14
Inservice workshop	20	54
Other	1	3
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	5	14
No	29	78
Nonresponses	3	08

APPENDIX F
DESCRIPTION OF THE TEACHERS IN REGION III
BY DEMOGRAPHIC VARIABLES

APPENDIX F

Description Of Teachers In Region III Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 40	%
Age		
20-27 years	1	3
28-35 years	12	30
36-42 years	10	25
43-50 years	5	13
51 years and older	12	30
Nonresponses	0	0
Sex		
Male	0	0
Female	40	100
Nonresponses	0	0
Race		
Indian	0	0
Black	12	30
Caucasian	28	70
Hispanic	0	0
Other	0	0
Nonresponses	0	0
Marital Status		
Single	1	3
Married	34	85
Widowed	1	3
Divorced/Separated	4	10
Nonresponses	0	0

APPENDIX F (continued)

Variable	N = 40	%
Educational Level		
Bachelor's	14	35
Bachelor's plus additional hours	12	30
Master's	9	23
Master's plus additional hours	5	13
Doctorate	0	0
Nonresponses	0	0
Years of Teaching Experience		
0- 4	2	5
5- 9	6	15
10-14	12	30
15-19	5	13
20 years or more	14	35
Nonresponses	1	3
Preparation for Teaching Special Needs Students		
None	14	35
One college course	3	8
Two or more college courses	4	10
Inservice workshop	17	43
Other	3	8
Teachers' Responses To Program Funding Currently Received for Special Needs Students		
Yes	18	45
No	18	45
Nonresponses	4	10

APPENDIX G
DESCRIPTION OF THE TEACHERS IN REGION IV
BY DEMOGRAPHIC VARIABLES

APPENDIX G

Description Of Teachers In Region IV Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 56	%
Age		
20-27 years	4	7
28-35 years	17	30
36-42 years	9	16
43-50 years	14	25
51 years or more	12	21
Nonresponses	0	0
Sex		
Male	1	2
Female	55	98
Nonresponses	0	0
Race		
Indian	4	7
Black	17	30
Caucasian	34	61
Hispanic	0	0
Other	0	0
Nonresponses	1	2
Marital Status		
Single	6	11
Married	46	82
Widowed	2	4
Divorced/Separated	2	4
NonResponses	0	0

APPENDIX G (continued)

Variable	N = 56	%
Educational Level		
Bachelor's	16	29
Bachelor's plus additional hours	28	50
Master's	7	13
Master's plus additional hours	4	7
Doctorate	1	2
Nonresponses	0	0
Years of Teaching Experience		
0- 4	0	0
5- 9	17	30
10-14	11	20
15-19	6	11
20 years or more	22	39
Nonresponses	0	0
Preparation for Teaching Special Needs Students		
None	15	27
One college course	4	7
Two or more college courses	9	16
Inservice workshop	37	66
Other	1	2
Nonresponses	2	4
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	11	20
No	40	71
Nonresponses	5	9

APPENDIX H
DESCRIPTION OF THE TEACHERS IN REGION V
BY DEMOGRAPHIC VARIABLES

APPENDIX H

Description Of Teachers In Region V Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 39	%
Age		
20-27 years	3	8
28-35 years	3	8
36-42 years	9	23
43-50 years	16	41
50 years or more	7	18
Nonresponses	1	3
Sex		
Male	0	0
Female	38	97
Nonresponses	1	3
Race		
Indian	0	0
Black	6	15
Caucasian	31	79
Hispanic	1	3
Other	0	0
Nonresponses	1	3
Marital Status		
Single	3	8
Married	32	82
Widowed	1	3
Divorced/Separated	2	5
Nonresponses	1	3

APPENDIX H (continued)

Variable	N = 39	%
Educational Level		
Bachelor's	11	28
Bachelor's plus additional hours	18	46
Master's	5	13
Master's plus additional hours	4	10
Doctorate	0	0
Nonresponses	1	3
Years of Teaching Experience		
0- 4	3	8
5- 9	4	10
10-14	8	21
15-19	12	31
20 years or more	12	31
Nonresponses	0	0
Preparation for Teaching Special Needs Students		
None	11	28
One college course	4	10
Two or more college courses	2	5
Inservice workshop	20	51
Other	3	8
Nonresponses	0	0
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	15	38
No	24	62
Nonresponses	0	0

APPENDIX I
DESCRIPTION OF THE TEACHERS IN REGION VI
BY DEMOGRAPHIC VARIABLES

APPENDIX I

Description Of Teachers In Region VI Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 39	%
Age		
20-27 years	2	5
28-35 years	9	23
36-42 years	12	31
43-50 years	10	26
51 years or more	6	15
Nonresponses	0	0
Sex		
Male	0	0
Female	39	100
Nonresponses	0	0
Race		
Indian	0	0
Black	3	8
Caucasian	36	92
Hispanic	0	0
Other	0	0
Nonrepsonses	0	0
Marital Status		
Single	2	5
Married	35	90
Widowed	0	0
Divorced/Separated	2	5
Nonresponses	0	0

APPENDIX I (continued)

Variable	N = 39	%
Educational Level		
Bachelor's	3	8
Bachelor's plus additional hours	26	67
Master's	5	13
Master's plus additional hours	4	10
Doctorate	0	0
Nonresponses	1	3
Years of Teaching Experience		
0- 4	4	10
5- 9	7	18
10-14	9	23
15-19	8	21
20 years or more	11	28
Nonresponses	0	0
Preparation for Teaching Special Needs Students		
None	12	31
One college course	3	8
Two or more college courses	6	15
Inservice workshop	19	49
Other	2	5
Nonresponses	3	8
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	5	13
No	29	74
Nonresponses	5	13

APPENDIX J
DESCRIPTION OF THE TEACHERS IN REGION VII
BY DEMOGRAPHIC VARIABLES

APPENDIX J

Description Of Teachers In Region VII Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 27	%
Age		
20-27 years	1	4
28-35 years	10	37
36-42 years	3	11
43-50 years	8	30
51 years or more	4	15
Nonresponses	1	4
Sex		
Male	0	0
Female	27	100
Nonresponses	0	0
Race		
Indian	1	4
Black	3	11
Caucasian	23	85
Hispanic	0	0
Other	0	0
Nonresponses	0	0
Marital Status		
Single	2	7
Married	24	89
Widowed	0	0
Divorced/Separated	1	4
Nonresponses	0	0

APPENDIX J (continued)

Variable	N = 27	%
Educational Level		
Bachelor's	10	37
Bachelor's plus additional hours	10	37
Master's	4	15
Master's plus additional hours	1	4
Doctorate	2	7
Nonresponses	0	0
Years of Teaching Experience		
0- 4	2	7
5- 9	6	22
10-14	6	22
15-19	6	22
20 years or more	7	26
Nonresponses	0	0
Preparation for Teaching Special Needs Students		
None	12	44
One college course	1	4
Two or more college courses	3	11
Inservice workshop	13	48
Other	1	4
Nonresponses	0	0
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	4	15
No	23	85
Nonresponses	0	0

APPENDIX K
DESCRIPTION OF THE TEACHERS IN REGION VIII
BY DEMOGRAPHIC VARIABLES

APPENDIX K

Description Of Teachers In Region VIII Who Attended The
Vocational Summer Workshop by Demographic Variables

Variable	N = 21	%
Age		
20-27 years	1	5
28-35 years	6	29
36-42 years	7	33
43-50 years	7	33
51 years or more	0	0
Nonresponses	0	0
Sex		
Male	0	0
Female	21	100
Nonresponses	0	0
Race		
Indian	0	0
Black	2	10
Caucasian	18	85
Hispanic	1	5
Other	0	0
Nonresponses	0	0
Marital Status		
Single	1	5
Married	18	85
Widowed	1	5
Divorced/Separated	1	5
Nonresponses	0	0

APPENDIX K (continued)

Variable	N = 21	%
Education Level		
Bachelor's	4	19
Bachelor's plus additional hours	10	48
Masters'	2	10
Masters' plus additional hours	4	19
Doctorate	0	0
Nonresponses	1	5
Years Of Teaching Experience		
0- 4	3	14
5- 9	3	14
10-14	5	24
15-19	4	19
20 years or more	6	29
Nonresponse	0	0
Preparation for Teaching Special Needs Students		
None	8	38
One college course	3	14
Two or more college courses	3	14
Inservice workshop	10	48
Other	0	0
Nonresponses	0	0
Teachers' Responses To Program Funding Currently Received For Special Needs Students		
Yes	3	14
No	16	76
Nonresponses	2	10

APPENDIX L
ATTITUDINAL ITEM MEANS AND STANDARD DEVIATIONS

APPENDIX L

Item Numbers, Total Score Means, Standard Deviations,
and Cases for Attitudinal Items

Item Numbers	Mean	Standard Deviations	Cases
11	3.00000	1.16298	276
12	2.38267	1.08859	277
13	3.98188	1.37410	276
14	3.67153	1.20913	274
15	2.28986	1.02278	276
16	3.79636	1.35789	275
17	2.70803	1.10369	274
18	4.16850	1.33067	273
19	2.59124	1.11597	274
20	2.48162	1.14412	272
21	3.80000	1.38075	275
22	2.25271	1.01484	277
23	2.69565	1.12594	276
24	2.32847	1.16982	274
25	1.80727	.90718	275
26	4.27407	1.23457	270
27	4.27106	1.31666	273
28	3.39163	1.20051	263

APPENDIX M
TOLERANCE SCORES

APPENDIX M

TOLERANCE SCORES

<u>Score</u>	<u>Frequency</u>
4.00	1
8.00	2
12.00	2
16.00	12
20.00	13
24.00	12
28.00	24
32.00	24
36.00	30
40.00	27
44.00	29
48.00	22
52.00	11
56.00	12
60.00	1
64.00	5
68.00	1
76.00	1
-	50*
<hr/>	<hr/>
TOTAL	279

MEAN 37.048

STANDARD DEVIATION 12.471

MEDIAN 36.000

*Missing cases

APPENDIX N
KNOWLEDGE SCORES

APPENDIX N

 KNOWLEDGE SCORES

<u>Score</u>	<u>Frequency</u>
20.00	1
50.00	1
55.00	2
60.00	1
70.00	3
80.00	1
85.00	2
95.00	4
100.00	4
105.00	11
110.00	14
115.00	17
120.00	14
125.00	24
130.00	20
135.00	18
140.00	15
145.00	10
150.00	5
155.00	3
-	109*
<hr/>	
TOTAL	279

MEAN 121.206

STANDARD DEVIATION 20.887

MEDIAN 125.000

*Missing cases

APPENDIX O
PATTERN MATRIX

APPENDIX O

Pattern Matrix for Attitudinal Items

Item Number	Factor 1	Factor 2	Factor 3	Factor 4
11	-.00281	.87698	-.10173	-.05975
12	.18710	.59107	-.16702	.06374
13	-.08578	.62640	.09411	.13901
14	-.05641	.56230	.15162	.05314
15	.50902	.24239	-.01124	-.18564
16	-.00131	.01500	.69325	.05113
17	.48807	.12812	.27961	-.17781
18	.00225	.03608	.71166	.04415
19	.45692	.09675	.38093	-.19460
20	.62523	.11891	.15901	-.16614
21	.15345	.08818	.46170	.16249
22	.74896	-.01599	.04990	.12548
23	.48060	.03083	.18856	.20212
24	.62351	-.07865	.11015	.15090
25	.81863	-.02220	-.27528	.02616
26	.07461	.07675	.08679	.62252
27	.00617	.18167	.01916	.60406
28	-.00749	.59715	.12810	.06760

APPENDIX P
STRUCTURE MATRIX

APPENDIX P

Structure Matrix for Attitudinal Items

Item Number	Factor 1	Factor 2	Factor 3	Factor 4
11	.30537	.82335	.19561	.15732
12	.36665	.62220	.11717	.19349
13	.19302	.66444	.32105	.32933
14	.21304	.60874	.34563	.23986
15	.59439	.38628	.19489	-.10620
16	.22686	.27496	.70977	.21253
17	.62168	.36938	.44021	-.06430
18	.24429	.30206	.73522	.21562
19	.61003	.35727	.51665	-.06764
20	.71720	.37405	.36266	-.07832
21	.33987	.35675	.57879	.29613
22	.76245	.32855	.31118	.15537
23	.55887	.34088	.39843	.26809
24	.63251	.24530	.31498	.17346
25	.27310	.20672	-.01657	-.01731
26	.15129	.30727	.27912	.66552
27	.10172	.35637	.22281	.65837
28	.26853	.65829	.35336	.26003

APPENDIX Q
FACTOR CORRELATION MATRIX

APPENDIX Q

Factor Correlation Matrix for Attitudinal Items

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1.00000			
Factor 2	.39044	1.00000		
Factor 3	.31842	.35553	1.00000	
Factor 4	.03065	.27394	.22696	1.00000